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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/559,259	04/27/2000	Hideyuki Hirano	1405.1020	2237
21171	7590	08/16/2004	EXAMINER	
STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			REAGAN, JAMES A	
			ART UNIT	PAPER NUMBER
			3621	

DATE MAILED: 08/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/559,259	Applicant(s) HIRANO ET AL.	
	Examiner James A. Reagan	Art Unit 3621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 July 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Status of Claims

1. This action is in response to the amendment and Request for Continued Examination (RCE) received on 12 July 2004.
2. Claims 1-26 have been examined.

RESPONSE TO ARGUMENTS

3. Applicant's arguments received on have been fully considered but they are not persuasive. Referring to the previous Office action, Examiner has cited relevant portions of the references as a means to illustrate the systems as taught by the prior art. As a means of providing further clarification as to what is taught by the references used in the first Office action, Examiner has expanded the teachings for comprehensibility while maintaining the same grounds of rejection of the claims, except as noted above in the section labeled "Status of Claims." This information is intended to assist in illuminating the teachings of the references while providing evidence that establishes further support for the rejections of the claims.

With regard to the Applicant's assertions that the prior art of record does not fairly teach or disclose each and every limitation contained within the claims, it appears as if the Applicant is reading limitations into the claims from the specification. Consequently, the points argued are not recited in the claims themselves. For that reason, a solid argument in their contemplation cannot be established. Subsequent amendments to the claim language that would include the positions presented by the Applicant's arguments would provoke the Examiner to address the claims individually and as a whole, in light of

the remaining limitations as well as the specification. Until such amendments are rendered, the arguments are disregarded and will not be countered.

In summary, the Examiner has taken the broadest and most reasonable interpretation of the claim limitations as written, in light of the specification. Although the specification may contain recitations of intended use, alternative points of view and subjective interpretative differences between the prior art of record and the present invention as premeditated, it is the claims themselves that are given patentable weight only inasmuch as they are constructed. Because the claims have been painted with the broad stroke of petitioning for an invention that encompasses more than is asserted in the Applicant's remarks and rebuttals, the prior art of record continues to fully disclose the Applicant's inventions *as claimed*.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-6, and 16-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yasukawa et al. (US 5,999,622) in view of Rhoads (US 6,343,138), and further in view of Millsted et al. (US 6,263,313 B1).

Examiner's note: Examiner has pointed out particular references contained in the prior art of record in the body of this action for the convenience of the Applicant. Although the specified citations are representative of the teachings in the art and are applied to the

specific limitations within the individual claim, other passages and figures may apply. Applicant, in preparing the response, should consider fully the *entire* reference as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the examiner.

Claims 1, 25, and 26:

With regard to the limitation of:

- *preparing a substantive data unit by encrypting digital content that is for distribution*, Yasukawa discloses distribution of encrypted data (column 1, lines 21-27).
- *preparing synthesized data by synthesizing the substantive data unit and the sample data unit, having embedded authorization information and distributing the synthesized data*, Yasukawa discloses combining encrypted and non-encrypted data into a single file (column 3, lines 65-67).

Yasukawa does not specifically disclose *extracting a portion of a digital content to be distributed as sample data, and preparing a sample data unit wherein authorization information containing information for accessing the encrypted digital content is embedded as invisible information in the sample data unit*. However, in column 3, lines 39-52, Yasukawa discloses encrypting only some segments of the complete file. Naturally, this would entail some form of extraction process. In column 4, lines 16-20, Yasukawa discloses encrypted and non-encrypted parts. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the invention of Yasukawa to encrypt just a sample of the data file and reinsert the encrypted section into the data file because it allows digital information to be copied and distributed easily over a wide variety of mediums, including modems, wireless technologies, CD-ROMs, floppy

disks, the Internet, bulletin boards, computer networks etc., while preventing unauthorized use of the data.

In addition, Yasukawa does not specifically disclose the use of invisible or hidden data. Rhoads, however, does show an identification code signal is hidden in a carrier signal (abstract). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the encryption method of Yasukawa with Rhoads' use of hidden data because if a given entity can recognize the signatures hidden within a given set of empirical data, that same entity can take steps to remove those signatures (Rhoads, column 63, lines 3-5).

The combination of Yasukawa/Rhoads does not specifically disclose data samples for preview purposes. However, Millsted discloses digital clips (column 81, lines 45-55), data extraction and previewing (column 75, lines 9-21), watermarking (column 64, line 61 to column 65, line 18), and encryption/decryption techniques for distribution of digital works (column 2, line 52 to column 3, line 4). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the method of Yasukawa/Rhoads' with Millsted's distribution techniques because this provides a system for tracking the use of digital data.

Claim 2:

With regard to the limitation of *enabling access to the synthesized data by separating the authorization information from the sample data unit, restoring from the authorization information a decryption key for decrypting the substantive data unit from said authorization information, and employing the content key to decrypt the substantive data unit into the original digital content*, Yasukawa discloses extracting the bitmap table from the synthesized file and decrypting the file data (column 6, line 30 to column 7, line 15).

Claim 3:

Yasukawa discloses the methods a shown above. Yasukawa does not disclose that *the sample data is image data contained in the digital content at least one process among image processing, resizing, compressing and a γ compensation is executed on image data contained in the digital content*. Rhoads, however, in column 6, line 16 to column 8, line 9 shows a process of scanning, digitizing, and processing an image to prevent unauthorized copying of the file. Rhoads also discloses scaling and resizing the image (column 8, lines 65-67), and compression and decompression techniques as well as standards (column 31, lines 26-46). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the encryption method of Yasukawa with Rhoads' use of image processing techniques because this prevents the unauthorized use of image documents.

Claim 4:

With regard to the limitation of *the sample data is index data for representing the substantive data unit*, Yasukawa discloses using a bitmap table as an index to identify which segments of a file have been encrypted (column 6, lines 30-34).

Claim 5:

Yasukawa discloses the methods a shown above. Yasukawa does not disclose that *the synthesized data contains a plurality of substantive data units based on a plurality of digital content items, and contains a plurality of sample data units corresponding to the plurality of substantive data units; and wherein sample data constituting the plurality of sample data units is linked with respective corresponding ones of the plurality of substantive data units*. Rhoads, however, in column 39, lines 3-12, discloses a series of frames within a movie with N-bit identification words encrypted within, wherein the plurality of frames are associated with the video stream. It would

have been obvious to one of ordinary skill in the art at the time of the invention to combine the encryption method of Yasukawa with Rhoads' use of multiple content items within a video stream because this allows related content to be grouped together for ease of decryption, recognition, and use, storage, and dissemination.

Claim 6:

Yasukawa discloses the methods as shown above. Yasukawa does not disclose that *the sample data units is data structuralized in one of JPEG and MPEG formats, and the synthesized data is prepared by add-on synthesizing the substantive data unit to the sample data unit using the format of the sample data unit*. Rhoads, however, in column 38, lines 4-30 discloses JPEG and MPEG formats as well as inserting the digital signature into the item using the same codecs. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the encryption method of Yasukawa with Rhoads' encryption of JPEG and MPEG files because this allows the signature to be recognized and extracted using the same software that allows viewing of the JPEG or playing of the MPEG.

Claim 16:

With regard to the limitation of *the sample data unit comprises as the invisible information a use count of times a user has used the digital content; characterized in that the invisible information is rewritten each time a user uses the digital content*, Yasukawa discloses a limited number of uses for the key (column 6, lines 18-27).

Claim 17:

With regard to the limitation of *the sample data unit comprises as the invisible information authorization information to enable use count control; characterized in that the invisible information is rewritten when a user uses the digital content a predetermined*

number of times and more, Yasukawa discloses a limited number of uses for the key (column 6, lines 18-27).

Claims 18 and 20:

With regard to the limitation of *characterized in that the invisible information is rewritten on decrypting and reading the substantive data unit*, Yasukawa discloses various decryption key controls (column 6, lines 4-29). Yasukawa does not specifically disclose that the key use is registered as it is opened or after it is closed. However, Examiner takes **Official Notice** that it is old and well known in the encryption arts to begin the count procedure when the digital content is opened or after the user has finished viewing or using the digital content, being merely a design choice. For example, if the user is granted a duration in which to listen to a song, counting may begin as soon as the song is opened. If a user is granted permission to use shareware 10 times, counting might begin after the software is closed.

Claims 19 and 21:

With regard to the limitation of *characterized in that the invisible information is rewritten when use of the digital content is ended*, Yasukawa discloses various decryption key controls (column 6, lines 4-29). Yasukawa does not specifically disclose that the key use is registered as it is opened or after it is closed. However, Examiner takes **Official Notice** that it is old and well known in the encryption arts to begin the count procedure when the digital content is opened or after the user has finished viewing or using the digital content, being merely a design choice. For example, if the user is granted a duration in which to listen to a song, counting may begin as soon as the song is opened. If a user is granted permission to use shareware 10 times, counting might begin after the software is closed.

Claim 22:

Yasukawa discloses the methods a shown above. Yasukawa does not specifically disclose that *the invisible information in the sample data unit comprises an error recovery function by containing redundant information*. Rhoads, however, in column 7, lines 1-18 discloses an error checking function, using 1 bit from a multi-bit word. Rhoads also discloses checksum and error-correcting codes, which ensure the exact transmission of data (column 53, lines 41-46). It would have been obvious to one of ordinary skill in the art at the time of the invention to include error-checking techniques because this ensures that data in delivered accurately.

Claim 23:

With regard to the limitation of *characterized in that limits on read-out and use in decrypting the substantive data unit are governed based on the invisible information in the sample data unit*, Yasukawa discloses a limited number of uses for the key (column 6, lines 18-27).

Claim 24:

With regard to the limitation of *characterized in that one of year, month, date, and time limits within which read-out and use is possible in decrypting the substantive data unit are governed based on the invisible information in the sample data unit*, Yasukawa discloses a limited number of uses for the key (column 6, lines 18-27).

6. Claims 7-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yasukawa/Rhoads/Millsted in view of Applicants own admission.

Claims 7 and 8:

The combination of Yasukawa/Rhoads/Millsted discloses the methods a shown above. Yasukawa/Rhoads/Millsted do not disclose that *the encryption key is at least one of user identification information, equipment identification information loaded in user-employed computers, CPU identification information loaded in the user employed computers, and identification information unique to digital-content-storing recording media*. Applicant, however, on pages 2 and 3 of the specification, discloses encrypting the key using "user-specific identification numbers such as hard disk drive identification numbers." It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Yasukawa/Rhoads/Millsted and modify it with the Applicant's use of unique identification numbers because using an ID number that is specific to a computer or a user allows for the generation of a key that can be used only for one person or one machine, thereby making unauthorized use of digital data less likely.

With regard to the limitation of *the encryption key is identification information common to a plurality of users*, applicant inherently discloses common ID numbers. In the case of a client computer on a network, if the user ID were that of a machine part, such as the hard drive or CPU, then the key would be applicable to the machine and any user who has access to the machine. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Yasukawa/Rhoads/Millsted and modify it with the Applicant's use of unique identification numbers common to a group of users because this would simplify the use of digital data where the data is shared by many users on a single machine.

Claim 9:

The combination of Yasukawa/Rhoads/Millsted/Applicant discloses the methods a shown above in the rejections of claims 7 and 8. Yasukawa/Rhoads/Millsted/Applicant do not specifically disclose that *the encryption key is at least one of identification information unique to distributors of the digital content, and identification information unique to authors of the digital content*. Rhoads, however, in column 40, lines 17-52 discloses using a header to identify the author of a digital work. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the encryption method of Yasukawa/Millsted/Applicant and modify it with Rhoads' use of header identification because including author identification in the key provides a non-reputable means for identifying the authors of the digital work, thereby preventing unauthorized claims to a digital work.

Claims 10, 11, and 12:

With regard to the limitation of a *decryption key for decrypting the encrypted encryption key is common to an encryption key for encrypting the digital content, the decryption key being a shared key based on exclusive information transmitted and received among users and content distributors, using symmetric cryptography*, Yasukawa discloses that a user "...receives a decryption key which allows decryption and use of the digital information" (column 1, lines 37-38). Yasukawa does not disclose that the keys are generated in pairs. However, Examiner takes **Official Notice** that it is old and well known in the encryption arts to utilize public and private key infrastructure (PKI). Employing PKI establishes a mathematical relationship between implemented between two trusted users on a network, ensuring only authorized use, distribution, and storage of a digital work.

Claims 13, 14, and 15:

With regard to the limitation of *the digital content distributors encrypt the encryption key employing a secret key, and the users decrypt the encrypted content key employing a public key provided in advance from the digital encryption distributors, using public key cryptography*, Yasukawa discloses that a user "...receives a decryption key which allows decryption and use of the digital information" (column 1, lines 37-38). Yasukawa does not disclose that the keys are generated in pairs. However, Examiner takes **Official Notice** that it is old and well known in the encryption arts to utilize public and private key infrastructure (PKI). Employing PKI establishes a mathematical relationship between implemented between two trusted users on a network, ensuring only authorized use, distribution, and storage of a digital work.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **James A. Reagan** whose telephone number is **(703) 306-9131**. The examiner can normally be reached on Monday-Friday, 9:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **James Trammell** can be reached at (703) 305-9768.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the **Receptionist** whose telephone number is **(703) 305-3900**.

Any response to this action should be mailed to:

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or faxed to:

(703) 305-7687 [Official communications; including

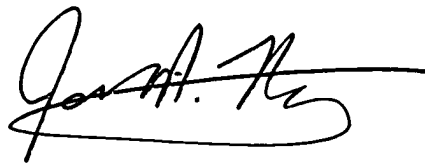
After Final communications labeled "Box AF"]

(703) 308-1396 [Informal/Draft communications, labeled "PROPOSED" or "DRAFT"]

Hand delivered responses should be brought to Crystal Park 5, 2451 Crystal Drive, Arlington, VA, 7th floor receptionist.

JAR

11 August 2004

A handwritten signature in black ink, appearing to read "James A. Reagan", with a stylized flourish at the end.